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| 10/699,230      | 10/31/2003  | Muhannad S. Bakir    | 62020-1400          | 3379             |

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EXAMINER

RUDE, TIMOTHY L

ART UNIT PAPER NUMBER

2883

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/699,230 | <b>Applicant(s)</b><br>BAKIR ET AL. |  |
|                              | <b>Examiner</b><br>Timothy L. Rude   | <b>Art Unit</b><br>2883             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 03 March 2006.  
2a)  This action is FINAL. 2b)  This action is non-final.  
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-39 is/are pending in the application.  
4a) Of the above claim(s) 5,7-18,22,25 and 27-39 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-4,6,19-21,23,24 and 26 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.  
10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Claims

Claim 1 is amended.

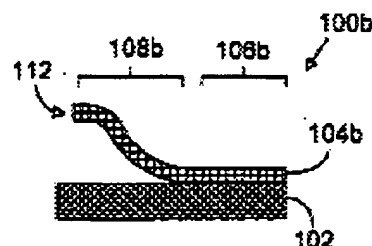
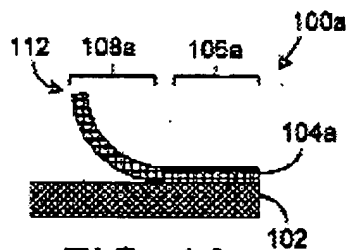
### Election/Restrictions

Please note: Applicant failed to eliminate recitations drawn to non-elected species in claims 2, 3, and 24. Examiner anticipates an amendment eliminating the recitations drawn to non-elected species and will examine claims 2, 3, and 24 as if they were presently drawn exclusively to the elected invention and species. This is to Applicant's advantage since the claims would otherwise be non-elected.

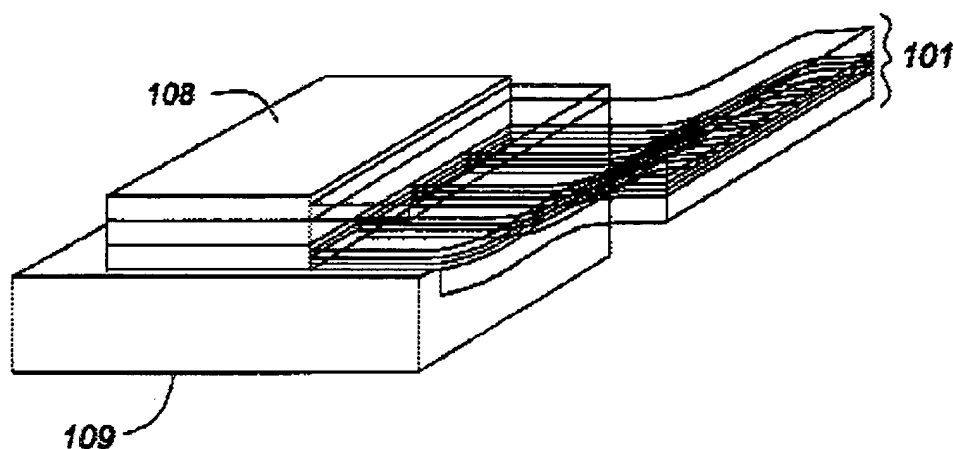
### Claim Objections

Claim 1 is objected to because of the following informalities: newly added limitations as to "second end of the second portion is directed in a direction up and away from the first substrate" is arguably drawn to non-elected sub-species AJ (see Figure 1A).

Please contrast claim 23 and Figure 1B.



For examination purposes, "second end of the second portion is directed in a direction up and away from the first substrate" will be considered to be - - second end of the second portion is directed in a direction above and away from the first substrate - - [portion coming straight out beyond the end of the substrate, i.e., portion near }101]:



**FIG. 10**

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

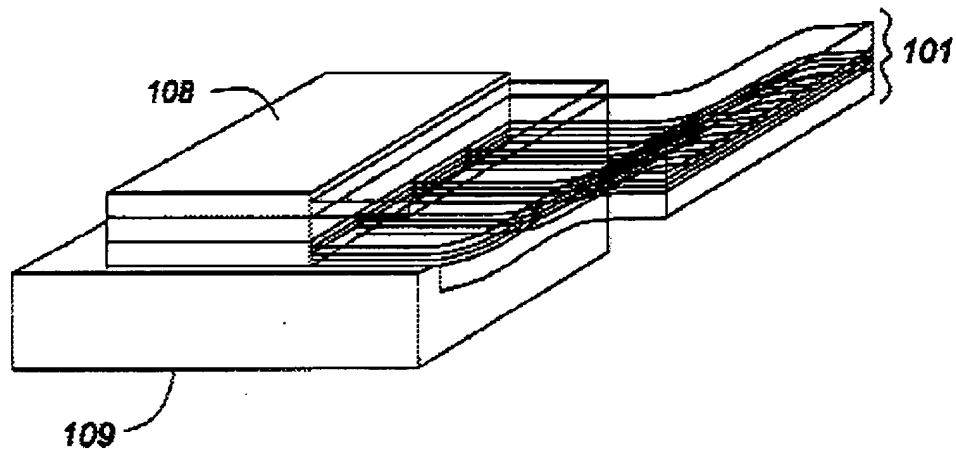
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 19, 20, 21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by De Dobbelaere et al (DD) USPAT 6,097,871.

As to claim 1, DD discloses a waveguide system in Figure 10, comprising: a first substrate, 109, having an off-surface and curved optical waveguide, 101, disposed thereon, wherein the off-surface and curved optical waveguide includes a first portion and a second portion, wherein the first portion is substantially parallel to the first substrate [portion coming straight out beyond the end of the substrate], wherein the second portion extends curving away from the first substrate [curved portion] whereby a second end of the second portion is directed in a direction above and away from the first substrate [Applicant's up and away], wherein the first portion has a first end, a second end, a length, a width, and a thickness, wherein the second portion has a first end, a second end, a length, a width and a thickness, wherein the second end of the first portion is substantially adjacent and in-line with the first end of the second portion [curved portion is integrated into the first portion], wherein the first portion comprises an optically conductive first material, and wherein the first portion comprises an optically conductive second material [sheet of waveguide and cladding, col. 3, line 40 through col. 4, line 67].



**FIG. 10**

As to claim 6, DD discloses the waveguide system of claim 1 above, wherein the first portion and the second portion have substantially the same thickness and width.

As to claim 19, DD discloses the waveguide system of claim 1, wherein the first substrate has from about 1 off-surface and curved optical waveguide to about 500,000 off-surface and curved optical waveguides per centimeter squared of the first substrate [very wide range wherein DD discloses invention entirely within claimed range as may be scaled by one of ordinary skill from size data in col. 5, line 35 through col. 6, line 20].

As to claim 20, DD discloses the waveguide system of claim 1, wherein the off-surface and curved optical waveguide has a height of about 10 to 500 micrometers

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[wide range wherein DD discloses invention entirely within claimed range as may be scaled by one of ordinary skill from size data in col. 5, line 35 through col. 6, line 20].

As to claim 21, DD discloses the waveguide system of claim 1, wherein the off-surface and curved optical waveguide has a thickness of about 0.1 to 500 micrometers and a width of about 0.1 to 500 micrometer [wide range wherein DD discloses invention entirely within claimed range as may be scaled by one of ordinary skill from size data in col. 5, line 35 through col. 6, line 20].

As to claim 23, DD discloses the waveguide system of claim 1, wherein the second portion includes at least one portion substantially parallel to the first substrate, 109 [portion coming straight out beyond the end of the substrate], and at least one portion curving away from the first substrate [Figure 10].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over DD.

As to claim 24, DD discloses the waveguide system of claim 1.

DD does not explicitly disclose a system wherein the off-surface and curved optical waveguide is included in a signal distribution system.

DD teaches in the background of the invention that such devices are used in signal distribution systems to provided satisfactory optical signal distribution [col. 1, lines 10-67].

DD is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to include the off-surface and curved optical waveguide in a signal distribution system to provided satisfactory optical signal distribution.



Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of DD with the off-surface and curved optical waveguide included in a signal distribution system to provided satisfactory optical signal distribution.

As to claim 26, DD discloses the waveguide system of claim 1.

DD does not explicitly disclose a system wherein the off-surface and curved optical waveguide is included in a integrated optical device.

DD teaches in the background of the invention that such devices are used in integrated optical devices to provided satisfactory optical coupling to/from the integrated optical device [col. 1, lines 10-67].

DD is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to include the off-surface and curved optical waveguide in a integrated optical device to provided satisfactory optical coupling to/from the integrated optical device.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of DD with the off-surface and curved optical waveguide included in a integrated optical device to provided satisfactory optical coupling to/from the integrated optical device.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over DD in view of Rhodes et al (Rhodes) USPAT 6,903,171 B2.

As to claim 2, DD discloses the waveguide system of claim 1.

DD does not explicitly disclose a system wherein the optically conductive first material comprises a low modulus material, polynorbornenes.

Rhodes teaches the use of polynorbornenes as an optically conductive material used for improved (high) Tg and low moisture absorption [col. 45, line 35 through col. 46, line 65].

Rhodes is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add an optically conductive first material comprises a low modulus material, polynorbornenes, for improved (high) Tg and low moisture absorption.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of DD wherein an optically conductive first material comprises a low modulus material, polynorbornenes, for improved (high) Tg and low moisture absorption.

As to claim 3, DD discloses the waveguide system of claim 1.

DD does not explicitly disclose a system wherein the optically conductive second material comprises a low modulus material, polynorbornenes.

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Rhodes teaches the use of polynorbornenes as an optically conductive material used for improved (high) Tg and low moisture absorption [col. 45, line 35 through col. 46, line 65].

Rhodes is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add an optically conductive second material comprises a low modulus material, polynorbornenes, for improved (high) Tg and low moisture absorption.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of DD wherein an optically conductive second material comprises a low modulus material, polynorbornenes, for improved (high) Tg and low moisture absorption.

As to claim 4, DD discloses the waveguide system of claim 1.

DD does not explicitly disclose a system wherein the optically conductive first material and the optically conductive second material are the same material.

Rhodes teaches the use of polynorbornenes as an optically conductive material used for improved (high) Tg and low moisture absorption [col. 45, line 35 through col. 46, line 65].

Rhodes is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add an optically conductive first and second material

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comprising a low modulus material, polynorbornenes, for improved (high) Tg and low moisture absorption.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of DD wherein an optically conductive first and second material comprises a low modulus material, polynorbornenes, for improved (high) Tg and low moisture absorption, resulting in the optically conductive first material and the optically conductive second material being the same material.

### ***Conclusion***

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



tlr

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